

IN THE CLAIMS

Claims 1 – 8 (canceled)

Claim 9 (new) A location registration server for a use in a mobile packet communication system including mobile terminals connected via a mobile radio communication network, subscriber nodes accommodating said mobile terminals, and gate nodes connected to fixed equipment including Internet service providers or local area networks, said location registration server being associated with a group of destination packet addresses having the same high-order digits, wherein said subscriber nodes, said gate nodes, and said location registration server are interconnected by a network and are each assigned a unique packet address for routing, said location registration server comprising:

a register which stores, for each mobile terminal assigned a packet address containing the high-order digit of packet destination address associated with said location registration server, the address of a subscriber node currently serving said each mobile terminal, or stores, for each fixed equipment assigned a packet address containing said high-order digit, the address of a gate node to which said each fixed equipment is connected;

means for retrieving, by reference to a destination packet address contained in a packet received from a transmitting node which is a subscriber node that received a packet from a particular mobile terminal or a gate node that received a packet from particular fixed equipment, the address of a mobile terminal corresponding to said destination address or the address of a receiving gate node connected to the fixed equipment corresponding to said destination address; and

means for returning the retrieved receiving node address to said transmitting node.

Claim 10 (new) A subscriber node for use in a mobile packet communication system comprising mobile terminals connected via a mobile radio communication network, gate nodes connected to fixed equipment including Internet service providers or local area networks, and a plurality of location registration servers each for a group of destination packet addresses having the same high-order digits, wherein said subscriber node accommodates said mobile terminals, said subscriber node, said gate nodes, and said location registration servers are interconnected by a network, and said subscriber node, said gate nodes, and said location registration servers are each assigned a unique address for routing , said subscriber node comprising:

means for receiving a packet from a particular accommodated mobile terminal;

a table for retrieving the address of a corresponding location registration server by reference to the high-order digits of the packet destination address;

means for transferring said received packet to said corresponding location registration server;

means for receiving a receiving node address returned from said corresponding location registration server, retrieved by the corresponding location registration server with reference to a destination address contained in said received packet;

means for temporarily storing said receiving node address returned from said location registration server; and

means for transferring a subsequent packet having the same destination address as the received packet directly to said receiving node by using said temporarily stored receiving node address.

Claim 11 (new) The subscriber node as claimed in claim 10, wherein said means for transferring a subsequent packet includes means for transferring directly to said receiving node any n-th packet ($n \geq 2$) having the same destination address and received from said particular accommodated mobile terminal.

Claim 12 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are each assigned a unique Internet address for routing, and said network interconnecting said subscriber node, said gate nodes, and said location registration servers is constructed from a router network.

Claim 13 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are each assigned a unique ATM address for routing, and said network interconnecting said subscriber node, said gate nodes, and said location registration servers is constructed using semi-permanent connections on an ATM network, and wherein said subscriber node, said gate nodes, and said location registration servers each include means for transferring said packet by using adaptation layer AAL Type 5 protocol.

Claim 14 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are each assigned a unique ATM address for routing, and said network interconnecting said subscriber node, said gate nodes, and said location registration servers is constructed using semi-permanent connections on an ATM

network, and wherein said subscriber node, said gate nodes, and said location registration servers each include means for transferring said packet by using adaptation layer AAL Type 2 protocol.

Claim 15 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are each assigned a unique address of adaptation layer AAL Type 2 for routing, and said network interconnecting said subscriber node, said gate nodes, and said location registration servers is constructed using semi-permanent connections of adaptation layer AAL Type 2 on an ATM network, and wherein said subscriber node, said gate nodes, and said location registration servers each include means for transferring said packet by using adaptation layer AAL Type 2 protocol.

Claim 16 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are each assigned a unique ATM connectionless address for routing, and said network interconnecting said subscriber node, said gate nodes, and said location registration servers is constructed from an ATM connectionless network, and wherein said subscriber node, said gate nodes, and said location registration servers each include means for transferring said packet by using adaptation layer AAL Type 5 protocol or adaptation layer AAL Type 2 protocol.

Claim 17 (new) The subscriber node as claimed in claim 10, wherein said subscriber node, said gate nodes, and said location registration servers are interconnected by switched virtual connections (SVCs) on an ATM network.